



# ROLE OF E-AGRICULTURE FOR EMPOWERING FARMING COMMUNITIES IN INDIAN CONTEXT

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## ABSTRACT

The global development of information and technologies (ICT) has created a new agricultural development paradigm that promises to transform the performance of the agricultural sector and improve rural livelihood in developing countries like India. E-Agriculture focus on the enhancement of agricultural and rural development through improved information and communication processes. More specifically, e-Agriculture involves the conceptualization, design, development, evaluation and application of innovative ways to use information and communication technologies (ICT) in the rural domain, with a primary focus on agriculture. Indian Agriculture contributes to 18.6 per cent of India's GDP, and approximately 59 per cent Indians derive their livelihood from the agricultural sector. This paper explores the government initiatives so far been taken under the aegis of e-agriculture or Information and Communication Technology (ICT) to the livelihoods of farming community in India and also the role and the advantages of E-agriculture in India.

**KEYWORDS:** Development, E-Agriculture, G.D.P, Information and communication Technology.

## INTRODUCTION:

E-Agriculture is a relatively recent term in the field of agriculture. The main phases of the agriculture industry include crop cultivation, water management, fertilizer application, pest management, harvesting, transfer of foods, safety, quality management and marketing management. Any system applied for getting information and knowledge for making decisions in any industry should deliver accurate, complete, concise information in time or on time. The information provided by the system must be in user-friendly form, easy to access, cost-effective and well protected from unauthorized accesses.

The Food and Agriculture Organization (FAO) of the United Nations, in collaboration with the International Telecommunication Union, has come up with E-agriculture strategy to help countries use information and communication technology to drive rural development. Primarily focusing on agriculture, Information and Communication Technology (ICTs) can help boost agricultural development by improving farmers access to vital information, so that they make best decisions and use their resources sustainably. E-agriculture, therefore, describes and emerging field focus on the enhancement of agricultural and rural development through improved information and communication process.

## OBJECTIVE OF THE STUDY:

- To analyse the recent government initiatives for e-Agriculture in India.
- To highlight importance of E-Agriculture for improving productivity in India.
- To analyse the advantages of information and communication technology in e-Agriculture.

## METHODOLOGY:

The prepared paper is a descriptive study in nature. The study has been carried out based on the collection of the relevant secondary data. Secondary data collection was based on various sources such as published books, articles published in different journals & newspapers, periodicals, conference paper, working paper and websites, etc

## Government initiatives to boost agriculture in India:

- i) **Kisan suvidha:** Kisan suvidha is an omnibus mobile app developed to help farmers providing relevant information to them quickly. With click of a button, they can get the information on weather of current day and next 5 days, dealers, market prices, agro-advisories, plant protection etc.
- ii) **E-Arik Centre:** The ICT based on agricultural education has the potential of empowering farming communities by improving access to information and knowledge sharing. The tribal farming communities of North Eastern Region (NER) of India remain one of most disadvantaged having little access to appropriate agricultural information. An ICT based initiative entitled e-Arik (e- Agriculture) was initiated during mid 2007. The first village knowledge centre was set up in Yarung village in East Siang district of Arunachal Pradesh. Presently, 500 farmers from 12 remote tribal villages are registered under the e-Arik system. The project team helps farmers access ICT based information.

- iii) **Soil Health Management:** National Mission for Agriculture (NMSA) has

been implemented during 12th plan with the objectives to make agriculture more productive, sustainable and climate resilient, to conserve natural resources, to adopt comprehensive soil health management practices, to optimize utilization of water resources etc.

- iv) **Kisan Call Centre:** It was started on 21<sup>st</sup> January, 2004 is an expert advisory system, in which farmers can call the toll free number 1800-180-1551 to seek expert advice on different matters related to agriculture allied activities.
- v) **E-Sagu:** It is an IT based personalised agro- advisory system. It aims to improve farm productivity by delivering high quality personalised(farm-specific) agro-expert advice in a timely manner to each farm at the farmer's door-steps without farmers asking a question. In e-sagu, rather than visiting the crop in person, the agricultural scientist delivers the expert advice by getting the crop status in the form of digital photographs and other information.
- vi) **DD kisan Channel:** The channel was started in 2015, provides agriculture related problems and their solution through direct question answers from New Delhi DDkisan channel by Agri. Scientists to the farmers at their own homes.
- vii) **Har Khet ko Pani "Prime Minister Krishi Sinchayee Yojana (PMKSY)":** Government of India with effect from 2015-16 is committed to accord high priority to water conservation and its management. To this effect PMKSY has been formulated with the vision of extending the coverage of irrigation "Har Khet Ko Pani" and improving water use efficiency "More crop per drop" in a focused manner with end to end solution on source creation, distribution, management, field application and extension activities.

## Advantages of ICT in Agriculture:

- 1) It can provide systems and tools to secure food traceability and reliability that has been an emerging issue concerning farm products since serious contamination such as chicken flu was detected.
- 2) It can facilitate rural activities and provide more comfortable and safe rural life with equivalent services to those in the urban areas, such as provision of distance education, telemedicine, remote public services, remote entertainment etc.
- 3) Empowerment of Stakeholders (Government Officials, Research, Education & Extension Scientists, farmers and other service providers such as Community Information centers).
- 4) Development of Knowledge Management, Decision Support and Advisory Systems to strengthen Extension services and also used for Farmers Redressal system
- 5) Efficient management (Development, Conservation, allocation and utilization) of resources.
- 6) Improved productivity and profitability of farmers through better advisory systems.

**SUGGESTIONS:**

The Government of India must come up with “Suitable Policies” and “Incentives” for the farmers so that they may be motivated and encouraged to give their best. This must be supported by the use of ICT that can do wonders for the agriculture sector of India. ICT can be used to improve the lives of the rural communities by leveraging of agriculture outputs through technological interventions. Some of the benefits of ICT for the improvement and strengthening of agriculture sector in India are:

- (a) Timely information on weather forecasts and calamities,
- (b) Better and spontaneous agricultural practices,
- (c) Better marketing exposure and pricing,
- (d) Reduction of agricultural risks and enhanced incomes,
- (e) Better awareness and information,
- (f) Improved networking and communication,
- (g) Facility of online trading and e-commerce.

**CONCLUSION:**

India is the country which is fully depended on agriculture. Indian government provides more facilities for the farmers to improve their status as well as productivity. All the facilities and plans are not reaching farmers properly. Most of the farmers do not know about using the new technologies in agriculture. Hence government makes plans to create the awareness to knowing about the facilities and plans. After that they can utilize all the facilities for improving the productivity.

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